

INTERNATIONAL
STANDARD

ISO
11014-1

First edition
1994-03-15

Safety data sheet for chemical products —

Part 1:

Content and order of sections

iTeh STANDARD PREVIEW

(standards.iteh.ai)

Fiches de données de sécurité pour les produits chimiques —

Partie 1: Contenu et plan type

<https://standards.iteh.ai/catalog/standards/sist/80c7442c-d29f-47aa-a37b-355689fbd698/iso-11014-1-1994>



Reference number
ISO 11014-1:1994(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11014-1 was prepared by Technical Committee ISO/TC 47, *Chemistry*.

ISO 11014 consists of the following parts, under the general title *Safety data sheet for chemical products*:

- Part 1: *Content and order of sections*
- Part 2: *Examples*

Annex A forms an integral part of this part of ISO 11014.

© ISO 1994

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland
Printed in Switzerland

Introduction

The safety data sheet for chemical products, SDS, gives information on various aspects of these chemical products (substances or preparations) concerning safety, health and environmental protection. The SDS supplies, for these aspects, basic knowledge of the chemical products and gives recommendations on protective measures and emergency actions. In some countries, this sheet is called a material safety data sheet, MSDS. Throughout this part of ISO 11014, the term SDS will be used.

The SDS is a means of transferring essential hazard information (including information on transport, handling, storage and emergency actions) from the supplier of a chemical product to the recipient of the product. It may also be used to transfer this information to institutions, services and other bodies that play a role in dealing with the chemical product.

The objective of this part of ISO 11014 is to create consistency in providing information on safety, health and environmental matters for chemical products.

In order to establish uniformity, certain requirements have been laid down as to how information on the chemical product shall be given (for instance the wording, numbering and sequence of the headings).

This part of ISO 11014 provides flexibility to accommodate different text-processing/transmission systems.

This part of ISO 11014 has been developed for worldwide application and follows the SDS model as outlined in e.g. EC Commission Directive 91/155/EEC defining and laying down the detailed arrangements for the system of specific information relating to dangerous preparations, and the Chemical Manufacturing Association (CMA) Interim guideline for the preparation of material safety data sheets, with only minor deviations in the text of the section headings. It does not necessarily reflect or represent the different national or local regulatory requirements that may be specific for certain countries/states. It is therefore recommended that reviews outlining the different national or local regulatory requirements relevant to SDSs are made available to those who prepare SDSs. The provision of this knowledge to SDS authors will enhance the establishment and acceptance of only *one* SDS per chemical product in different countries/states, enabling fully consistent information to be provided.

The obligations of the recipient of an SDS are beyond the scope of this part of ISO 11014. Some of them are included, however, to clearly differentiate between the obligations of the supplier of the SDS and those of the recipient of the SDS.

iTeh STANDARD PREVIEW
This page intentionally left blank
(standards.iteh.ai)

ISO 11014-1:1994

<https://standards.iteh.ai/catalog/standards/sist/86c7442e-d29f-47aa-a37b-355689fbd698/iso-11014-1-1994>

Safety data sheet for chemical products —

Part 1:

Content and order of sections

1 Scope

This part of ISO 11014 presents information for the compilation and completion of an SDS.

It defines specifically:

- the general layout of the SDS;
- the 16 standard headings;
- the numbering and the sequence of these 16 standard headings;
- the items necessary to fill in an SDS and the conditions of their applicability or utilization.

This part of ISO 11014 does not define a fixed format, nor does it include an actual SDS to be filled in.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 11014. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 11014 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 31-8:1992, *Quantities and units — Part 8: Physical chemistry and molecular physics*.

3 Definitions

For the purposes of this part of ISO 11014, the following definitions apply.

3.1 safety: Freedom from unacceptable risk of harm.¹⁾

3.2 risk: The probable rate of occurrence of a hazard causing harm, and the degree of severity of the harm.¹⁾

3.3 hazard: A potential source of harm.¹⁾

3.4 harm: Physical injury and/or damage to health or property.¹⁾

3.5 intended use: The use of a product or process under conditions or for purposes in accordance with specifications and instructions provided by the supplier — including information for publicity purposes.¹⁾

3.6 reasonably foreseeable misuse: The use of a product or process under conditions or for purposes not intended by the supplier, but which may happen, induced by the design of the product, in combination with, or as a result of, common human behaviour.¹⁾

3.7 supplier: Party responsible for making a chemical product available to a recipient.

3.8 recipient: Party receiving a chemical product for industrial or professional use, such as storage, handling, processing or packaging, from a supplier.

1) ISO/IEC Guide 51:1990, *Guidelines for the inclusion of safety aspects in standards*.

3.9 substance; chemical: Chemical element and its compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

NOTE 1 The word "chemical" is used in the USA and Canada.

3.10 preparation; mixture: Mixture or solution composed of two or more substances.

NOTE 2 The word "mixture" is used in the USA and Canada.

3.11 chemical product: Substance or preparation.

3.12 ingredient: Constituent of a chemical product.

3.13 exposure control: The full range of precautionary measures to protect the user of the chemical product.

3.14 item: Any textual information corresponding to a subheading in an SDS.

4 General aspects

An SDS applies to a chemical product as a whole.

Information contained in an SDS is non-confidential. Confidential information on ingredients may be given in a different way, provided section 2 of annex A is observed.

Any supplier should provide a complete SDS to the recipient and shall report relevant information on safety, health and environment. The supplier has the obligation to keep the SDSs up to date and to provide the recipient with the latest edition.

The recipient of an SDS is responsible for acting in accordance with a risk assessment in regard of the conditions of product use and for taking necessary precautionary measures in a given work situation, and has the responsibility to keep the users informed about the hazards relevant to their individual workplace.

The recipient of an SDS is responsible for choosing the appropriate way of informing the users. When formulating the specific instructions for the workplace, the recipient should consider the general recommendations of relevant SDSs.

Since an SDS is merely product-related, it cannot take into account all the possible situations which may arise at any given workplace. Therefore an SDS only constitutes part of the information necessary to establish a safety programme.

5 Contents and general layout of an SDS

An SDS shall provide the chemical product information given under the following 16 standard headings, the wording, numbering and sequence of which shall not be altered:

- 1 Product and company identification
- 2 Composition/information on ingredients
- 3 Hazards identification
- 4 First-aid measures
- 5 Fire-fighting measures
- 6 Accidental release measures
- 7 Handling and storage
- 8 Exposure controls/personal protection
- 9 Physical and chemical properties
- 10 Stability and reactivity
- 11 Toxicological information
- 12 Ecological information
- 13 Disposal considerations
- 14 Transport information
- 15 Regulatory information
- 16 Other information

Under each of the 16 standard headings, relevant information shall be stated. If this information is not available, then it shall be stated why not. Blanks shall not be left, with one exception under standard heading 16 "Other information", where a blank is allowed. In an SDS, the sources of information do not normally have to be specified.

The 16 sections corresponding to the 16 standard headings shall be completed in accordance with the recommendations and requirements of annex A "Instructions for the compilation and completion of an SDS".

These 16 sections may be subdivided by means of subheadings. However, unlike the 16 standard headings, the subheadings shall not be numbered.

The use of subheadings where appropriate is recommended. When subheadings or items are given, they shall be given in the sequence specified in annex A.

Every page of an SDS shall include the name of the chemical product as used on the label, and shall be dated and numbered. The page numbering system should include the total number of pages or should indicate the last page as such. The date indicated shall be the latest revision date.

The 16 sections shall be separated clearly. The headings and subheadings shall be presented in a conspicuous way.

Texts in an SDS should be written in a clear and concise manner. Commonly used phrases are recommended. An SDS should be in a language acceptable to the recipient.

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

[ISO 11014-1:1994](https://standards.iteh.ai/catalog/standards/sist/86c7442e-d29f-47aa-a37b-355689fbd698/iso-11014-1-1994)

<https://standards.iteh.ai/catalog/standards/sist/86c7442e-d29f-47aa-a37b-355689fbd698/iso-11014-1-1994>

Annex A (normative)

Instructions for the compilation and completion of an SDS

The following instructions are intended as guidance for the compilation and completion of SDSs. Their purpose is to ensure that the content of each of the sections listed will enable recipients to take the necessary measures relating to safety, protection of health at the workplace and protection of the environment.

- The 16 sections of SDSs shall be completed in accordance with the recommendations and requirements of this annex.
- This annex lists the main items which will be used to complete the 16 sections. This annex lists the main items only, because it is impracticable to list all items which may possibly be included in an SDS.
- These main items may be used as subheadings in an SDS. If they are used, the wording given is recommended, not obligatory. The preferred wording is underlined. Other items may be used as subheadings, but are not recommended.
- Information not specifically relevant to one of the items/subheadings mentioned in this annex, but relevant for the SDS, may be stated under an additional subheading, called for instance "Further information" or "Specific data".
- For a given chemical product, not all of the items/subheadings listed have to be used and completed, since some of them are optional.
- Items/subheadings shall be included in the SDS in accordance with the following criteria:

Standard: the notation [S] associated with an item/subheading indicates that the accurate data or information shall be supplied in every case and for every product, thus providing complete information. Statements such as "not relevant", "not applicable" and "not available" are not authorized in these cases.

Informative: the notation [I] associated with an item/subheading indicates that explicit information

shall be given, even though the corresponding items are not relevant to the product concerned or the information is not available yet. Statements such as "not relevant", "not applicable" and "not restricted" may be used, if they can be justified. Professional judgement should be used in selecting these statements.

Applicable: the notation [A] associated with an item/subheading indicates that both the items and the data listed may be relevant to:

- the product concerned (properties, use, etc.);
- local requirements;
- safety, prevention and protection.

Subheadings marked [A] for which no information is available shall be deleted.

- In no case, [S], [I] or [A], are subheadings without relevant information allowed.

1 PRODUCT AND COMPANY IDENTIFICATION

This section shall state the product name as used on the label [S], the supplier product code [A], as well as the name [S], address [S] and telephone number [S] of the supplier. If applicable, the emergency telephone number [A] used by the company should be given. Telex number [A] and telefax number [A] may also be given.

2 COMPOSITION/INFORMATION ON INGREDIENTS

This section shall state whether the chemical product is a substance or a preparation [S].

In the case of a substance, the common chemical name or the generic name [S] shall be given. Synonyms [A], if any, and the Chemical Abstract Service Registry Number (CAS number) [A] should be given. Ingredients contributing to the hazard [I] shall also be indicated.

In the case of a preparation, information about the chemical nature [I] of the product shall be given. It is not necessary to give the full composition. When defined, components contributing to the hazard [I] or impurities contributing to the hazard [A] of the preparation should be given, with their chemical or generic name [I] and their concentration or concentration range [I]. The classification and hazard labelling [A] of these components or impurities may be given.

Reference should be made to the classification system used.

3 HAZARDS IDENTIFICATION

This section shall clearly and briefly summarize the most important hazards and effects of the product [I] (adverse human health effects [A], environmental effects [A], physical and chemical hazards [A]) and, where appropriate, specific hazards [I].

Main symptoms [A] can be given as well.

The classification [A] of the chemical product may be given. Reference should be made to the classification system used.

An "Emergency overview" [A] may also be given.

4 FIRST-AID MEASURES

This section shall state the first-aid measures to be taken, if necessary. If appropriate, it shall state which actions have to be avoided at all costs. The information should be readily understandable by the victim and/or the first-aider.

The information [S] shall be subdivided according to the different exposure routes, i.e. inhalation [A], skin contact [A], eye contact [A] and ingestion [A].

A brief description [A] of the most important symptoms and effects may be given here, but a detailed description of symptoms and effects should be given under heading 11.

If appropriate, advice for the protection of first-aiders [A] and/or special notes to a physician [A] may be included here.

5 FIRE-FIGHTING MEASURES

This section shall state which extinguishing media are suitable [I] and subsequently, if appropriate, which extinguishing media are NOT suitable [A].

Specific hazards [A] with regard to fire-fighting measures, specific methods [A] of fire-fighting and

special equipment for the protection of firefighters [A] should be indicated here.

6 ACCIDENTAL RELEASE MEASURES

This section shall contain information on:

- personal precautions [I];
- environmental precautions [I];
- methods for cleaning up [S] (recovery [A], neutralization [A] and disposal, if different from section 13 [A]).

This information should include prevention of secondary hazards [A].

7 HANDLING AND STORAGE

Handling [I]

This subsection shall describe appropriate technical measures [I] (prevention of user exposure [A], prevention of fire and explosion [A]) and precautions [I] for safe handling of the chemical product, such as local and general ventilation and measures to prevent aerosol and dust generation. It shall contain specific safe handling advice [I], such as avoidance of contact with incompatible materials.

Storage [I]

This subsection shall describe appropriate technical measures [I] and storage conditions [I] (suitable [I], to be avoided [A]) for safe storage of the chemical product, including separation from incompatible products [I]. It shall in particular contain information in respect of safe packaging materials [I] (recommended [I], not suitable [A]).

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

If appropriate, engineering measures to reduce exposure [A] should be given in this section. This information should complement that already given under heading 7 above.

Specific control parameters [A] such as limit values [A] or biological standards [A] with their, preferably dated, references should be indicated. Information on the recommended monitoring procedures [A] with their references should be given.

This section shall also contain recommendations on appropriate personal protective equipment [I], such as for: